UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,999	10/30/2003	Hidenobu Kamizono	Q77868	5659

23373	7590	09/27/2004

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER
AWAD, AMR A

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _30 October 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-13_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-13_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _10/30/04_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Substitute for Form 1449 A & B/PTO	Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*	Application Number	Cont. of 09/599,569
	Confirmation Number	Not yet assigned
	Filing Date	October 30, 2003
	First Named Inventor	Hidenobu KAMIZONO
	Art Unit	Not yet assigned
	Examiner Name	Not yet assigned
Sheet 1 of 1	Attorney Docket Number	Q77868

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code[2] *(if known)*		
AA		US 5,245,321		09-1993	Franz et al.
		US 5,646,648		07-1997	Bertram
		US 5,675,361		10-1997	Santilli
		US 5,707,160		01-1998	Bowen
		US 5,864,334		01-1999	Sellers
		US 5,909,210		06-1999	Knox et al.
		US 6,046,728		04-2000	Hume e tal.
		US 6,198,474		03-2001	Roylance
AA		US 6,396,483		05-2002	Hiller

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation[6]
		Country Code[3]	Number[4]	Kind Code[5] *(if known)*			
AA		JP	59-151328		10-09-1984		
AA		JP	4-354012		12-08-1992		
AA		JP	10-260763		09-1998		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation[6]

Examiner Signature	Amr Awad	Date Considered	9-21-2004

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] See Kind Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or in the comment box of this document. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to indicate here if English language Translation is attached.

DETAILED ACTION

1.   The preliminary amendment includes only claims 1, 3-5, 7 and 12-13, and applicant stated that this listing of claims will replace all prior versions and listing of claims in the application. However, applicant has not officially cancelled claims 2, 4, 6 and 8-10. Therefore, examiner will assume that claims 2, 4, 6 and 8-10 are still pending in the application.

Information Disclosure Statement

2.   The examiner has considered the information disclosure statement filed October 30, 2003; see attached PTO-1449.

Double Patenting

3.   A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer <u>cannot</u> overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 9-11 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-3 of prior U.S. Patent No. 6,697,054. This is a double patenting rejection.

Claim Rejections - 33 U.S C. § 103

4.   The following is a quotation of 35 U. S. C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are Such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary- skill in the art to which said subject matter pertains. patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox et al. (US patent NO. 5,909,210; hereinafter referred 1:o as Knox).

Knox (figure 3) teaches a keyboard device (80) for key inputting by selecting any one of two functions (Knox teaches that the two functions are, typing function and positional function) (col. 11, lines 21-31), effected by certain keys (90) on a keyboard (80), wherein hands of a user present at the keyboard are detected by senior (74), and one of the two functions affected by the certain keys is selected based on the result of the detection by the sensor (Knox teaches in the alternative embodiment that the switching from the cursor positional function to the typing function is carried out by detecting multiple fingers, and the switching from the typing function to the cursor positional function is carried out when a single finger is detected) (col. 11, lines 31-41).

Knox does not expressly teach that the sensor detects the hands of a user at the home position. However, home position is the position, which the user has his hand on the keyboard when he starts typing. As indicated above, Knox

teaches that when multiple fingers is detected by the sensor, the mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple fingers detected by the sensor would be detected when the user is about to start typing (i.e., when the hand on home position).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to realize that, when the multiple fingers are detected by the sensor in Knox's device, the user would have his fingers in the home position because such position is usually the normal position which is taking by the user when he starts typing. Such position facilitates and expedites the typing on the keyboard.

As to claim 12, the claim is a broader version of cairn 1 and is analyzed as previously discussed with respect to claim 1.

6.   Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox as applied to claim 1 above, and further in view of Hiller (U'S Patent NO. 6,396,483).

As discussed above, Knox teaches all the limitations of claim 2 except the citation that the certain keys are ten-key section provided with numeric input function and cursor shift function.

However, Hiller (figures 1 & 3-4) teaches a keyboard (100) wherein only a ten-key section (105) can be switched between a numeric keypad function and a cursor positioning function (abstract and col. 3, lines 12-32).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Knox's keyboard device using Hiller's teaching of having only the numerical-key section (ten-key section) switches between the two functions (numeric input and cursor positioning) so as motivated by Hiller, because the numeric keypad is seldom used, an opportunity is therefore presented to make more effective use of this area (by using the same keys in both numerical input mode and cursor positioning mode) without sacrificing the functionality of a numeric keyboard (col. 2, lines 33-39). Furthermore, by allowing only the numerical key section to be switched between the two functions, the rest of the keys in the keyboard will be free to be used for typing while the numerical key section is used for cursor positioning increase the speed and the efficiency of data entry.

7.   Claims 3 and 5 are rejected under U.S. C. 103 (a) as being unpatentable over Sellers (US patent NO. 5,864,334) in view of Knox.

As to claim 3, Sellers (figure 1) teaches a keyboard device (10) for key inputting by selecting any one of two functions (typing function and cursor position function) (col. 5, lines 5759) affected by certain keys (29) on a keyboard (28). Seller teaches a sensor (camera 52) for detecting the hand of the user above the keyboard (step 98 of figure 8) (col. 8, lines 25-28), a function switching (58) to select one of the two functions by pressing a key (col. 6, lines 30-41), a sensor validating/invalidating switch to changeover the validation/invalidation of the detection result of the sensor (steps 98 and 106 of figure 8 which validate the

hand configuration in the observation zone) (col. 8, lines 25-28 and 37-45). Sellers also teaches a control section for selecting one of the two functions according to the detection result of the sensor when the sensor validating/invalidating switch is validated (figure 8, YES or NO in step 98, and then YES in step 106 for generating a pick signal to have the device act as cursor positioning; or YES or NO in step 98, then NO in step 106, then NO in step 112 and then YES in step 114 to have the device switch back to the typing mode using hand movement without using the switch 58), and by the function switching key (58) when the validating/invalidating switch is invalidated (figure 8, NO in steps 98 and 106 and then YES in step 112 for switching from the cursor positioning mode to typing mode and YES in step 94 to switch back to cursor mode using only the switch 58 without detecting the hand) (col. 8, lines 12-54).

Sellers does not teach that the sensor detects whether hands of a user are present at home position. Note that, in step 114 of figure 8, Sellers teaches that to change from cursor mode to typing mode without using the switch (58), the sensor has to detect the re-entry of the hand and pressing any. Such teaching may suggest having the user in typing position when detected. But the mode changes is instigated when the hand re-entry is detected and any key is depressed, and not upon sensing the hand only.

However, home position is the position, which the user has his hand on the keyboard when he starts typing. Knox teaches that when multiple fingers are detected by the sensor, the mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple fingers detected by the sensor would be detected

when the user is about to start typing (i.e., when the hand on home position), and the mode changing is instigated when the hand is detected.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Knox's teaching of having the switching to one of the two functions carried out by detecting the user's, hand in home position, to be incorporated to Sellers's device because such position is usually the normal position which is taking by the user when he starts typing. Such position facilitates and expedites the typing on the keyboard. Furthermore, switching to typing mode upon sensing the user's hand will accelerate the switching and therefore, accelerate the entry of data.

As to claim 5, Sellers (figure 1) teaches a keyboard device (I O) for key inputting by selecting any one of two functions (typing function and cursor position function) (col. 5, lines 5759) affected by certain keys (29) on a keyboard (28). Seller teaches a function switching key (58) to select one of the two functions by pressing a key (col. 6, lines 30-41), a sensor (camera 52) which is activated (ON state) when the hand is detected above the keyboard (YFS in step 98 or YES in step 106 of figure 8) and inactive (OFF state) when the hands are not detected (NO in steps 98 and 106 of figure 8). Sellers also teaches a control section for monitoring respective events of press-down of the function switching key (steps 94 and 112 of figure 8) and the transition from ON state to OFF state (NO in steps 98 and 106 of figure 8) of the sensor and from the OFF state to the ON state of the sensor and selecting alternatively one of the two functions, each time when one of the events occurs (after re-entering the hand and press key,

the device switches to the typing mode (YES in step 114), and if the switch

depressed, the device switches to typing mode (YES in step 112)) (col. 8, lines

12-54).

Sellers does not teach that the sensor detects whether hands of a user

are present at home position. Note that, in step 114 of figure 8, Sellers teaches

that to change from cursor mode to typing mode without using the switch (58),

the sensor has to detect the re-entry of the hand and pressing any. Such

teaching may suggest having the user in typing position when detected. But the

mode changes is instigated when the hand re-entry is detected and any key

impressed, and not upon sensing the hand only.

However, home position is the position which the user has his hand on the

keyboard when he starts typing. Knox teaches that when multiple fingers is

detected by the sensor, the mode changes to typing position (col. 11, lines 31-

41). Therefore, the multiple fingers detected by the sensor would be detected

when the user is about to start typing (i.e., when the hand on home position).

Therefore, it would have been obvious to a person of ordinary skill in the

art at the time the invention was made to use Knox's teaching of having the

switching to one of the two functions carried out by detecting the user's hand in

home position, to be incorporated to Sellers's device because such position is

usually the normal position which is taking by the user when he starts typing.

Such position facilitates and expedites the typing on the keyboard. Furthermore,

switching to typing mode upon sensing the user's hand will accelerate the

switching and therefore, accelerate the entry of data.

8.   Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hiller in view of Knox.

As to claim 7, Hiller (figure 1) teaches a keyboard device (100) that

includes a first group of keys (101) provided on a keyboard, a second group of

keys (numeric keypad area 105 which functions as numerical key entry as shown

in figure 3) on the opposite side of the first group of keys (col. 2, lines 40-45 and

col. 3, lines 12-18). Hiller shows a control section (205) for disabling the input of

the second group of keys (Hiller figure 4 teaches disabling the keypad area 105

to be activated in a mouse mode) (col. 2, lines 51-54 and col. 3, lines 19-22).

Hiller does not teach a sensor taking as a border for detecting whether

hands of a user are present at the home position of the first group of keys, and

wherein the control section is disabling the input by the second group of keys

while the sensor detects hands.

However, Knox (figure 3) teaches a keyboard device (80) for key inputting

by selecting any one of two functions (Knox teaches that the two function are the

typing function or positional function) (col. 11, lines 21-31), affected by certain

keys (90) on a keyboard (80), wherein hands of a user are present at the

keyboard in typing position is detected by a sensor (74) wherein the sensor i s

located in the border of the keyboard (80), and one of the two functions affected

by the certain keys is selected based on the result of the detection by the sensor

(Knox teaches in the alternative embodiment that the switching from the

positional function to the typing function is carried out by detecting multiple

fingers, and the switching from the typing function to the positional function is

carried out when a single finger is detected) (col. 11, lines 31-41). Note that, the home position is the position, which the user has his hand on the keyboard when he starts typing. As indicated above, Knox teaches that when multiple fingers is detected by the sensor, the mode changes to typing position (col. 11, lines 31-41). Therefore, the multiple fingers detected by the sensor would be detected when the user is about to start typing (i.e., when the hand on home position).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Hiller's device to include Knox's teaching of having a sensor on the border of the keyboard, that detects the user's hand in home position and to disable the input of the keypad (switching between two functions) in accordance to the detection of the hand to be incorporated to Hiller's device so that, the user may intuitively switch between the two functions (I.e., activate or deactivate the digitizer 10) which make the device user friendly. It would also increase the speed of the operations on the device by not requiring the depressing of a control key to switch between modes. Having the sensor on the boarder of the keyboard is obvious to a person of ordinary skill in the art because having the sensor in the border would allow to detect the position of the user's hands on the entire keyboard.

Note that, Hiller and Knox are combinable to contemplate the limitations of claim 7 because both reference are direct to a keyboard used for typing and for cursor positioning. The digitizer (flat input device 105) of Hiller is only located in the ten-key section of the keyboard (i.e., second group of keys). Therefore, to combine the teaching of Knox to Hiller, the sensor of Knox would be applied to

the digitizer portion of Hiller, simply because switching between two modes in

Knox's device is carried out on the digitizer (10).

As to claim 8, as disclosed above, Hiller (figure 3) teaches that the second

group of keys (105) includes a group of numeric input keys (col. 3, lines 12-14).

9.   Claims 4 and 6 are rejected under 35 U. S. C. 103 (a) as being

unpatentable over Sellers and Knox as applied to claims 3 and 5 above, and

further in view of Hiller.

As discussed above, Sellers and Knox teach all the limitations of claims 4

and 6 except the citation that the certain keys are ten-key section provided with

numeric input function and cursor shift function.

However, Hiller (figures 1 & 3-4) teaches a keyboard (100) that includes a

ten-key section (105), which has a numeric keypad function and a cursor

positioning function (abstract and col. 3, lines 12-32).

Therefore, it would have been obvious to a person of ordinary skill in the

art at the time the invention was made to modify Sellers's keyboard device using

Hiller's teaching of having only the numerical-key section (ten-key section)

switches between two functions (numeric input and cursor positioning) so as

motivated by Hiller, because the numeric keypad is seldom used, an opportunity

is therefore presented to make more effective use of this area (by using the same

area in both numerical input mode and cursor positioning mode) without

sacrificing the functionality of a numeric keyboard (col. 2, lines 33-39).

Furthermore, by allowing only the numerical key section to be switched between

the two functions, the rest of the keys in the keyboard will be free to be used for typing while the numerical key section is used for cursor positioning increase the speed and the efficiency of data entry.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703)305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. A.

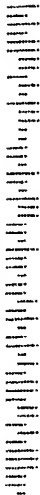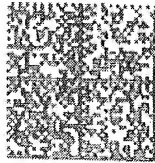**AMR A. AWAD
PRIMARY EXAMINER**

TC0600

PK2

AN EQUAL OPPORTUNITY EMPLOYER